Appendix A
Practice Questions

Craning Terms Quiz

1. Breaking strength of wire rope is also known as:
   A. Rated strength
   B. Ultimate strength
   C. Gross capacity
   D. Effective strength

2. The point about an object around which its weight is evenly distributed is called the:
   A. Radial center line
   B. Static radius
   C. Center of gravity
   D. Balance point

3. When the force that the extension is exerting on the crane is higher than the extensions' actual weight, it is mounted as a/an:
   A. Auxiliary counterweight
   B. Stored extension
   C. Stowed extension
   D. Erected extension

4. What is the uppermost section of a crane boom, which usually includes the upper load sheave assembly, called?
   A. Heel section
   B. Gantry
   C. Jib section
   D. Boom tip section

5. What is the main boom angle minus the jib offset called?
   A. Erected jib angle
   B. Jib angle to the ground
   C. Rated jib angle
   D. Jib angle to the boom

6. What is the point, or line, about which a crane tips/rotates called?
   A. Tipping axis
   B. Outrigger beam
   C. Center pin
   D. Both A & C are correct

7. When the force an attachment exerts on a crane is lower than its actual weight, it is referred to as the:
   A. Effective weight of an erected jib
   B. Weight of a stored extension
   C. Effective weight of a stowed extension
   D. Weight of a rated effective load

8. What is safe working load also called?
   A. Gross load
   B. Gross strength
   C. Rated strength
   D. Effective weight

9. What is the amount by which the ultimate strength is divided to get the rated strength called?
   A. Rated load
   B. Load ratio
   C. Safety factor
   D. Lowest capacity

10. What is a fixed length of wire rope with mechanical fittings at both ends for pinning segments of wire rope together called?
    A. Bridle sling
    B. Pendant
    C. Sling
    D. Boom stop

Inspections Quiz

1. A person inspecting cranes should have what kind of knowledge?
   A. Practical
   B. Hypothetical
   C. Theoretical
   D. Both A & C

2. According to OSHA 1926 CC, which of the following is not a type of OSHA inspection?
   A. Shift
   B. Monthly
   C. Annual
   D. Semi-annually

3. According to OSHA 1926 CC, who must inspect the equipment prior to initial use, that has had modifications or additions which may affect the safe operation of the equipment?
   A. Competent person
   B. Qualified person
   C. Third party inspector
   D. Lift director

4. According to OSHA 1926 CC, monthly inspections must be performed by a:
   A. Qualified person
   B. Competent person
   C. Qualified entity
   D. Designated person

5. According to OSHA 1926 CC annual inspections must be performed by a:
   A. Qualified person
   B. Third party
   C. Competent entity
   D. Designated person

6. The linear distance it takes for one strand to make one revolution around the wire rope core is called:
   A. Strand lay
   B. Rope layer
   C. Lay length
   D. Lay rotation

7. According to OSHA 1926 CC, the monthly inspection report must be kept on file for a minimum of:
   A. One week
   B. One month
   C. Three Months
   D. One year

8. According to OSHA 1926 CC, the inspection required on a crane that's been idle for three months or more, is called:
   A. Shift
   B. Daily
   C. Monthly
   D. Annual

9. The operator must test the anti-two-block, the LMI, and run the crane through all its functions before each shift.
   A. False
   B. True

10. Upon completion of assembly, who must inspect the crane to assure that the crane is configured according to manufacturer specifications.
    A. Competent person
    B. Qualified person
    C. Assembly/disassembly director
    D. Designated person

11. According to OSHA 1926 CC, the inspection performed on a crane that has been modified or altered must include:
    A. Functional testing
    B. Pre-modification meeting
    C. Annual inspection criteria
    D. Manufacturer's representative

Wire Rope Quiz

1. In wire rope, when the strands go to the left and the wires go to the left it is identified as:
   A. Right regular lay
   B. Left regular lay
   C. Right lang lay
   D. Left lang lay

2. In wire rope when the strands go to the right and the wires go to the left it is identified as:
   A. Rotation resistant
   B. Left regular lay
   C. Right alternate lay
   D. Right regular lay

3. In wire rope when the strands go to the right and the wires go to the left, then the right, then the left, etc. It is identified as:
   A. Left lang lay
   B. Right alternate lay
   C. Left regular lay
   D. Rotation resistant

4. In wire rope when the outer strands go in one direction and the inner strands go in the opposite direction it is identified as:
   A. Rotation resistant
   B. Left regular lay
   C. Alternate lay
   D. Left lang lay

5. For running rope, the SWL of right regular lay wire rope, with a breaking strength of 105,000 lbs. is:
   A. 21,000 pounds
   B. 30,000 pounds
   C. 35,000 pounds
   D. 43,000 pounds

6. An advantage of a compacted (swaged) wire rope fitting would be:
   A. High strength
   B. Wear resistance
   C. Crush resistance
   D. All of the above

7. When using rotation resistant wire rope with a becket/wedge socket, the tail length of the dead end should be a minimum of how many rope diameters?
   A. 6
   B. 10
   C. 12
   D. 20

8. The dead end of a wire rope, protruding from the becket, should never be less than:
   A. 4”
   B. 6”
   C. 8”
   D. 10”

9. The safety factor for regular lay running rope while hoisting personnel is:
   A. 3.5 : 1
   B. 5 : 1
   C. 7 : 1
   D. 10 : 1

10. The term “rope lay” may signify:
    A. The grade of the wire used in the rope
    B. A width of wire rope
    C. Direction of rotation of wires and strands
    D. Strength of wire rope in a specific distance

11. The correct installation of wire rope from a reel to a drum is:
    A. Bottom of reel to top of drum
    B. Over the top then under
    C. Top to top, bottom to bottom
    D. Right across then up

12. The horizontal distance for one rotation of a strand around the wire rope is called:
    A. Strand lay
    B. Rope layer
    C. Lay length
    D. Lay rotation

Rigging Quiz

1. What factors must be considered for safe wire rope sling use?
   A. Size, hitch, angle, sharpness
   B. Crane capacity, width, angle, height
   C. Length, size, legs, wire rope lay
   D. Lay, length, angle, size

2. Which type slings require tags?
   A. Chain
   B. Synthetic
   C. Wire rope
   D. All of the above

3. According to OSHA 1926.251, what is the safety factor for wire rope slings?
   A. 3 to 1
   B. 4 to 1
   C. 5 to 1
   D. 10 to 1

4. According to OSHA 1926.251, which one of the following sling hitch types would have the highest capacity?
   A. Double wrap choker hitch
   B. Basket hitch
   C. Choker hitch
   D. Straight vertical hitch

5. Which horizontal sling angle should not be exceeded?
   A. 120 degrees
   B. 90 degrees
   C. 60 degrees
   D. 30 degrees

6. When using new wire rope, what is the maximum static load called, that a sling is designed to lift?
   A. Breaking strength
   B. Nominal strength
   C. Rated capacity
   D. Net capacity

7. What is the safety factor for alloy steel chain slings?
   A. 3 to 1
   B. 4 to 1
   C. 5 to 1
   D. 6 to 1

8. What precaution should be used when using three and four legged slings?
   A. Capacities should be doubled
   B. Load per leg should be considered
   C. Shackles should be used in each eye
   D. Clevises should be used in each eye

9. What is the sum of the three angles in the rigging triangle?
   A. 120 degrees
   B. 160 degrees
   C. 180 degrees
   D. 360 degrees

10. Of the following, under which condition will a basket hitch be formed when both eyes of a sling are placed in the same hook?
    A. Always
    B. If 5 degree sling angle and D/d are maintained
    C. If sling angle to hook is less than 45 degrees
    D. A & B

Setup Quiz

1. Approximately 50% of crane accidents are the result of:
   A. Faulty equipment
   B. High winds
   C. Structural failure
   D. Improper setup

2. A crane must be setup to within what percentage of level grade for the load charts to be accurate?
   A. 1 percent
   B. 2 percent
   C. 3 percent
   D. 5 percent

3. According to OSHA 1926 CC, what is the requirement for blocking under the outrigger floats?
   A. 3 times the area of the float
   B. 5 times length & width
   C. Must extend beyond float 1 foot on all sides
   D. Must be sufficient to sustain anticipated loads.

4. According to OSHA 1926 CC, prior to setup, whose responsibility is it to ensure that ground conditions are adequate to support the crane and anticipated loads?
   A. Site supervisor
   B. Operator
   C. Controlling entity
   D. Lift director

5. What is two blocking?
   A. Using two blocks under each outrigger
   B. Blocking under beams and jacks
   C. Hoisting the ball into the boom point
   D. Adding a second hoist block

6. When should a site survey be done?
   A. After leveling the crane
   B. During the shift inspection
   C. Before the equipment is moved in
   D. It is always done with the lift plan

7. The highest ground bearing pressure occurs while lifting:
   A. Over the rear
   B. Over the front
   C. Over the corner
   D. Your counterweights

Boom Assembly/ Disassembly Quiz

1. All lifts for assembly disassembly (A/D) must be rigged by a:
   A. Competent operator
   B. Lift director
   C. Competent rigger
   D. Qualified rigger

2. A crewman who will work in an area not visible to the operator must inform whom?
   A. The A/D director
   B. The signal person
   C. The foreman
   D. The operator

3. While performing A/D work, when is it permissible to work under power lines?
   A. Never
   B. If no part of the equipment can make contact with the power lines
   C. If no part of the equipment can get within 10 feet of the power lines
   D. If power is shut off and the lines are visibly grounded.

4. When should a boom pin be removed from under a pendant in tension?
   A. When boom point is resting on blocking
   B. If the butt section is properly supported
   C. Any time is okay
   D. Never

5. A boom chart indicates:
   A. The capacity of the boom sections
   B. Serial numbers of boom sections available
   C. The manufacturers recommended configuration
   D. The best looking combination

6. Why should bottom pins be removed from the outside of the boom only?
   A. You can get a better swing at them
   B. It's easier to install them from the inside
   C. It reduces the hazards of being boom struck
   D. It helps with inspections

7. When must fall protection be used in A/D work?
   A. When more than 6' above the ground
   B. If fall distances are in excess of 15'
   C. Around moving machinery
   D. When not on a catwalk or stairway

8. What type of rigging should be used on boom sections to minimize the potential for damage?
   A. Chain spreaders
   B. Manila street hooks
   C. Synthetic slings
   D. Wire rope slings

Operational Aids Quiz

1. LMI is an acronym for:
   A. Load motion indicator
   B. Load movement indicator
   C. Load moment indicator
   D. Load minute indicator

2. When should operational aids be relied upon as fail-safe?
   A. Always
   B. Usually
   C. Under certain conditions
   D. Never

3. What is the operator's correct procedure to follow if a load moment indicator (LMI) fails?
   A. Shut down until it is repaired
   B. Continue making allowances for LMI errors
   C. Use the load chart and boom angle
   D. Follow OSHA's temporary alternative measures and/or MFR's recommendations

4. What functions are disabled by a load moment limiter (LML) overload?
   A. Hoist up
   B. Boom down
   C. Scope out
   D. All of the above

5. Category 2 operational aids that are not working properly must be repaired no later than how many days after the deficiency occurs?
   A. 7 calendar days
   B. 30 calendar days
   C. 14 working days
   D. 30 working days

6. Most load moment indicators (LMI) will :
   A. Monitor the load
   B. Indicate an approach of an overloading situation
   C. Indicate a two-block occurrence
   D. All of the above

7. According to OSHA 1926 CC, which of the following is a safety device?
   A. Boom angle indicator
   B. Automatic anti two-blocking device
   C. Crane level indicator
   D. Boom length indicator

8. What is the maximum weight an LMI can be used to weigh a load?
   A. Up to 100% of the rated capacity at the maximum radius of the proposed lift
   B. Up to 75% of the rated capacity at the maximum radius of the proposed lift
   C. No more than 50% at working radius
   D. An LMI cannot be used to weigh a load

Communication Quiz

1. The operator must obey a stop signal from:
   A. Only the designated signal person
   B. Only the qualified signal person who was assigned prior to the lift
   C. Only the competent signal person
   D. Anyone

2. When the operator becomes aware of a safety problem and needs to communicate with the signal person, the operator must:
   A. Safely stop operations
   B. Sound the horn
   C. Raise the load slowly then stop
   D. Notify the supervisor

3. Crane signal charts must be posted:
   A. Only on the crane
   B. Inside and in the vicinity of the crane
   C. On the crane or in the cranes vicinity
   D. On the outside of the crane & in the vicinity

4. If the operator loses sight of the load, he/she must:
   A. Continue with same functions until sight is regained
   B. Stop until a proper signal is received
   C. Lower load slowly & call the signal person on cell phone
   D. Land the load and await instructions

5. When a signal person is in communication with more than one crane, what must be implemented?
   A. A system to identify the crane each signal is for
   B. The signal person must face the crane that is being signaled
   C. The use of another signal person
   D. Different set of hand signals for each crane

6. A signal person giving hand signals must use :
   A. Site approved crane signals
   B. Method they are most familiar with
   C. Standard method
   D. Operators signaling preference

7. New signals must be:
   A. Equally effective
   B. Nationally recognized
   C. Agreed upon
   D. All of the above

8. The signals used and means of transmitting the signals to the operator must be:
   A. Appropriate for the site conditions
   B. Only those approved by the operator
   C. Specific to each type of crane
   D. Approved by all parties except site supervisor

9. The operators reception of voice signals must be all of the following except:
   A. By a hands free system
   B. Through an undedicated channel
   C. Clear and precise
   D. Effective and reliable

10. Which of the following is a requirement for the use of non-standard hand signals?
    A. Effective
    B. Agreed upon
    C. Equally effective
    D. All of the above

11. The operator's reception of signals must be:
    A. Have a volume control
    B. Be hands free
    C. Not obstruct visibility
    D. Run off fail safe batteries

12. Voice signals must be communicated:
    A. Clearly
    B. In a language understood by the operator and signal person
    C. During the operation
    D. All of the above

13. Which of the following must each voice signal contain?
    A. Function and direction
    B. Distance and/or speed
    C. Function and stop
    D. All of the above

Operations Quiz

1. High boom angles on rubber may result in:
   A. Decreased visibility
   B. Increased work area
   C. Increase in head room
   D. Backward instability

2. A suspended load moved to a longer radius will:
   A. Increase the cranes load moment
   B. Decrease the cranes load moment
   C. Not change the cranes load moment
   D. Have no effect because radius is not applicable to load moment

3. Boom deflection is less prevalent with:
   A. A light load
   B. Longer load radius
   C. Greater jib offset
   D. Increased load

4. On a crawler crane, rearward stability limits may be established with:
   A. The boom straight off the side
   B. The crane leveled to within 1%
   C. The fuel tanks half full
   D. All of the above

5. The operator must test the brakes each time a load is handled, that is what percentage or more of the cranes' maximum line pull?
   A. 50%
   B. 75%
   C. 90%
   D. 100%

6. On a level crane, the rate of tipping can occur more rapidly when:
   A. The center of gravity is close to the counterweight
   B. The center of gravity is high
   C. The crane is setup on a hill
   D. One outrigger is in a hole

7. When a truck crane booms up with a load, the center of gravity moves:
   A. Left only
   B. Right only
   C. Back
   D. Forward

8. When there is concern about safety, the operator must have the authority to stop and refuse to handle loads until who has determined it is safe to do so?
   A. Site supervisor
   B. Competent person
   C. Lift director
   D. Qualified person

9. According to OSHA 1926 CC, the LMI can be used to determine load weight:
   A. Always
   B. Usually
   C. Under certain conditions
   D. Never

10. When a symmetrically balanced load is tilted up, and where booming is the only function needed to keep the boom aligned with the load, the load will:
    A. Side load the boom
    B. Feel twice as heavy until it clears the ground
    C. Have a decrease in actual load weight
    D. Feel half as heavy until it clears the ground

Multiple, Complex & Critical Lifts Quiz

1. A critical lift would not include:
   A. Hoisting personnel
   B. Multi-crane picks
   C. 90% rated capacity
   D. Duty cycle operations

2. On a dual crane lift, if one crane sets the load down before the other, total load weight transfer can be:
   A. Considerable
   B. Negligible
   C. Disastrous
   D. All of the above

3. An out of level crane swinging 90 degrees or more can lead to:
   A. An out of radius condition
   B. Structural damage or failure
   C. Contact of the load with the boom
   D. All the above

4. A multi-crane lift may have multiple signal persons but:
   A. One must signal the other
   B. Either can signal any crane
   C. All operators receive signals from just one signal person
   D. One must act as the rigger

5. A critical lift should be:
   A. Laid out with a tape
   B. Supervised by a lift director
   C. Picked a few inches and the brakes tested
   D. All of the above

6. The first part of a suspended personnel handling operation must be preceded by a:
   A. Trial lift
   B. Proof test
   C. Meeting of all persons involved
   D. Work deck inspection

7. The maximum wind speed recommended by ANSI to lift personnel is:
   A. 15 mph
   B. 20 mph
   C. 25 mph
   D. No limit given